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ABSTRACT

Three articles about mathematics and science braille are provided for braille transcribers and teachers of the visually handicapped. The first article discusses common problems such as setting braille writers incorrectly, duplicating transcribed materials unnecessarily, and incorrectly transcribing from typescript. The second article provides a June 1, 1983 Nemeth Code update concerning braille indicators, shapes, spacing, abbreviations, symbols of groups, and division. The third article presents a Nemeth braille quiz which highlights many unusual problems. Transcribers are asked to locate in the Code the section that correctly answers the questions. (LH)

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MATHEMATICS AND SCIENCE BRAILLE

Problems That Shouldn't Be

Von E. Eulert, Chairman

Several transcriptions have crossed my desk this year which will cause problems in duplicating. The transcribers used the recommended 41 cells but started in cell 2. This put the final cell in cell 42 on the page. It is possible for most, but not all, Thermoform machines to get a clear impression of the 42nd cell but it takes special care by the operator. When using 41 cells to a line, always set your braille writer to start in cell 1 (as far to the right as possible) and to end on cell 41 (the blank cell on the right) and place your paper against the right stop on the writer. Your duplicating team will appreciate it.

We have received pleas for help in setting up tables for transcription and have discovered the identical tables listed in the BTTB catalog. A lot of time and effort will be saved if you will check all tables against the catalog before transcribing them. Even if the table is *not* listed in the catalog it may still be available as a recent acquisition. Send a photo-copy of the table in question to BTTB and ask if it is available. The address of BTTB is on the permanent pages in the back of this Bulletin. Do yourself a favor and check it out. (Caution: Don't look for identical titles, look for identical content.)

We have also received questions from different transcribers and discovered that two (in one case three) transcribers were working on the same text. This should not happen. Transcribers of Nemeth Code and especially of computer notation are in short supply. Don't compound the problem. Before starting any transcription be sure the following steps have been taken:

1. The title has been checked with APH for previous or current transcription.

2. An intention form has been filed with APH. Your assignments chairman may be the one who takes these steps but you can assure yourself that it has been done.

Transcribing From Typescript:

Care must be taken when transcribing from typed material. Be sure you know what is intended. For one thing, typists routinely use underscoring to indicate italics. If this is the case, use the italic type-form indicator in braille.

Another source of problems in typed material is Greek letters, especially the "Δ" (Delta). The "Δ" often looks just like an equilateral triangle. You can usually tell from context which is right.

Also, carefully examine all superscripts and subscripts. They are often poorly placed. As an example, one Chemistry Laboratory Manual shows MnO_4 in some places and MnO_4^- in others. The transcriber must then determine which is correct. If you know nothing about chemistry, you can either consult a *printed* chemistry textbook or contact someone more knowledgeable for the answer. In this example, the second one is correct (superscript "−" should be to the right of the subscript "4" making it non-simultaneous). Overlapping of superscripts and subscripts in print can also pose problems. This can occur when one such configuration appears below another in typescript and the typist has not left enough space between lines. A subscript in the top line may appear to be part of the superscript in the lower one. If you are aware of this possibility, it is usually easy to see which is correct.

You may encounter problems with letters in typed material. The same type-form may be used for both abbreviations and letters. You will have to judge from context whether these are letters or abbreviations. The letter "l" (ell) and the digit "1" (one) may be identical in type or in some cases, the letter "l" (ell) and the capital "I" (eye) may be identical. (The latter problem often exists in *printed* chemistry texts, also.) Watch carefully. Be sure you know what you have.

Correction:

In the Fall 1982 Bulletin, page 15, there is an error in the print of example 3. The minus fell from between the fraction lines and landed between the "z's". The braille is correct.

Spring, 1983

EC 165 155

Changes in the Nemeth Code

Von Eulert

At the spring meeting of BANA the following additions and corrections were adopted to become effective June 1, 1983. In order for the information to get to the transcribers as quickly as possible we have been asked to publish them in the *Bulletin.*

Although the "Keystroke" may be used with computer text, this is a change in the Nemeth Code only and if used in computer text, the Nemeth Indicators of the Computer Code must be used. Make these changes in your copy of *The Nemeth Braille Code For Mathematics And Science Notation, 1972 Revision.*

Add to RULE I—BRAILLE INDICATORS: SHAPE INDICATORS listing as a subentry to Interior Shape-Modification. (Page 6)

"Keystroke" (Limited to use with calculator and computer related text)

Add to RULE XVI—SHAPES listing as a subentry to Interior Shape-Modification Indicator (Page 110); the same insert noted for RULE I above. Then add to Section III. Shape with Interior Modification (page 116) a new "d".

d. When, and only when, a shape with interior modification depicts a labeled calculator or computer key within the instructional text, it must be represented in the contracted form employing the keystroke shape symbol/indicator.

i. The Key label will immediately follow the keystroke indicator.

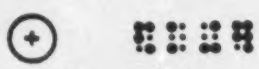
ii. The shape of the key is irrelevant. The actual shape(s) used in a particular text should be specified on the Transcriber's Notes page.

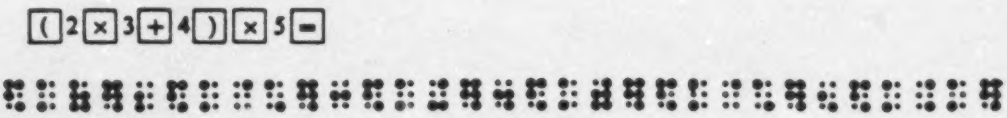
iii. No single keystroke construction may be divided between braille lines.

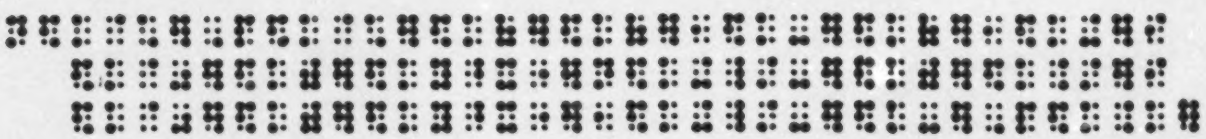
iv. The rules for preferred division of mathematical expressions do not apply; do not drop to a new line because the symbol on the key is a sign of comparison. If it is possible, duplicate the print lines when such lines are arranged in a logical sequence.

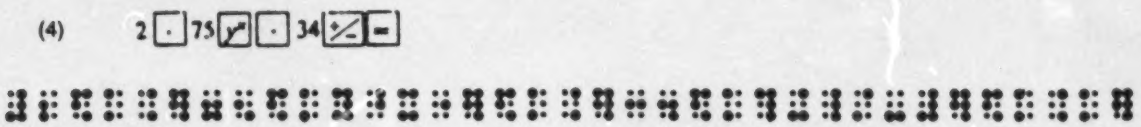
v. No contractions may be used in a word, part of a word, or an abbreviation in contact with this symbol/indicator whether capitalized, italicized, neither or both.

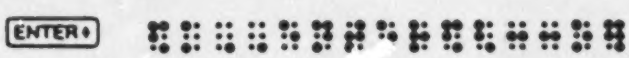
vi. No space may be left between keystroke constructions and other similar constructions or mathematical symbols in a sequence of related calculations. Arrows contained in the labels on the keys should not be spaced from the material to which they apply.

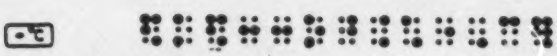
(1) 

(2) 

(3) 

(4) 

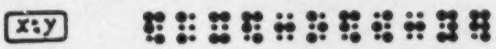
(5) 

(6) 

(7)

Add to Section 115. Spacing With Symbols of Shape as a new "e". (page 118)

e. No space may be left between keystroke constructions and other similar constructions or mathematical symbols in a sequence of related calculations. Arrows contained in the labels on the keys should not be spaced from material to which they apply.



More examples and explanations of the "keystroke" rules change can be found in the Nemeth Code Workshop Report which will be available October 1.

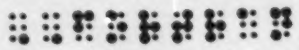
RULE II, Section 16. Numerals in Diagrams (page 18) should be changed so that the first sentence reads:

"In diagrams which contain numeric labels, the numeric indicator must be used except for the numeric labels on number lines in which case the numeric indicator should be omitted."

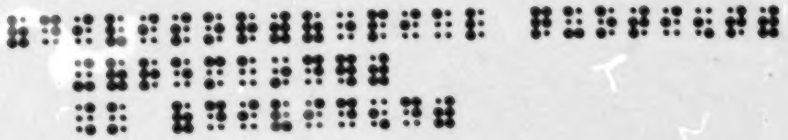
ERRATA

RULE VIII-ABBREVIATIONS Section 49.a.iii Acronyms (1) (Page 55)

FORTRAN should not be contracted. Change braille to:

(1) 

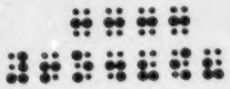
RULE XVIII, Section 120. Symbols of Grouping. a.(14) (page 124) Should be broken into one more line. Change braille to:

(14) 

RULE XXIV. Section 180 Division. c. (2) (page 170)

A numeric indicator is required before the "6" (the divisor). The problem is not aligned vertically for computation.

Change braille to:

(2) 

FOCUS ON

MATHEMATICS AND SCIENCE BRAILLE

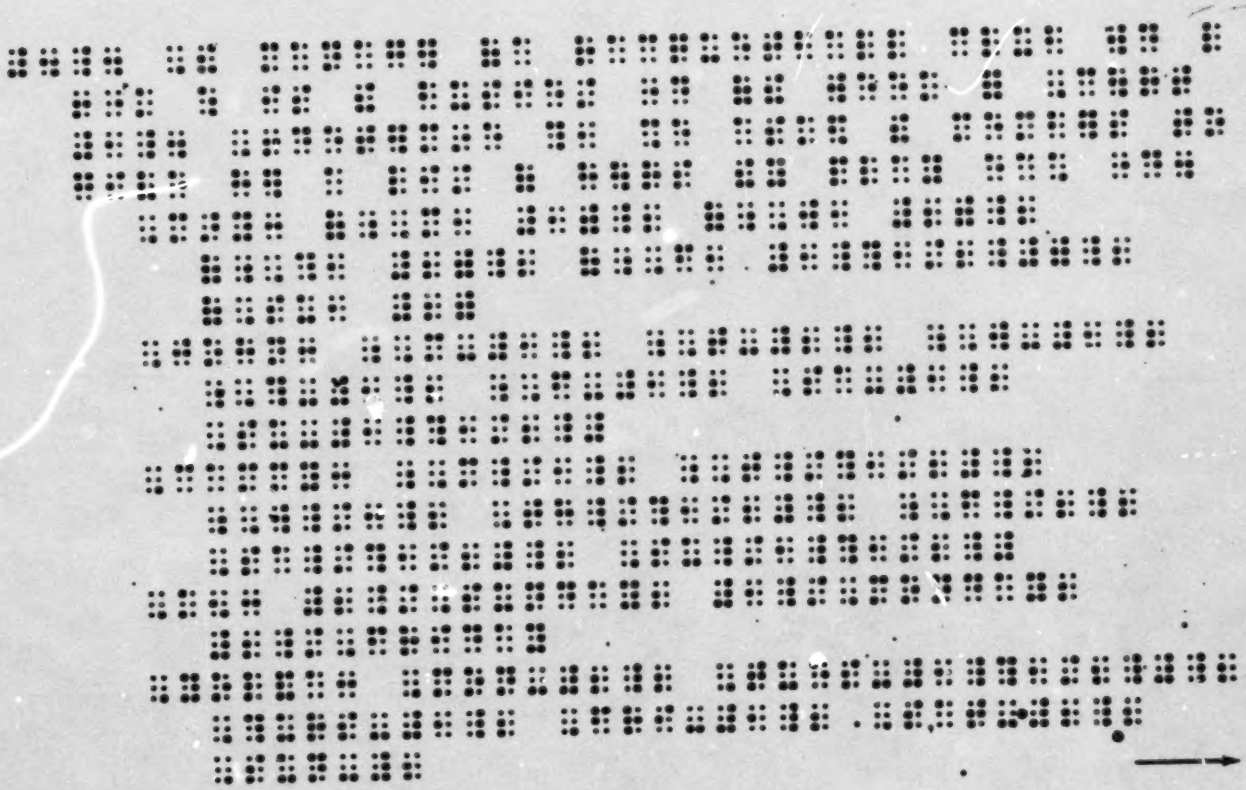
Nemeth Braille Quiz

Doris Cohn, Chairman

This short exercise has many unusual problems. Following the braille are questions about each item (name of member). Your task is to locate in the Code the section that correctly answers these questions.

4. The manager of a racquetball club would like to know which is the busiest day of the week for Court 1. To determine this, she asked the members to give her a list of hours they play each day.

Mary: (M,1); (W,2); (Th,2); (F,1½); (Su,2)
John: M-1; T-2; W-1; Th-1; F-1; Sa-1; Su-1½
Cammy: M/1; T/4; W/3; Th/½; F/2; Sa/½; Su/1½
Ken: 2/Sunday; 1/Monday; 2/Friday
Yolanda: Mon-2; Tues-1½; Thurs-1; Fri-1; Sat-2; Sun-2



ANSWERS TO NEMETH BRAILLE QUIZ

1. Section 49a(vii).
2. Section 51b.
3. Section 52.
4. Section 5[illegible].
5. Section 9f.
6. Section 64.
7. Section 136.
8. Section 54b.
9. Section 11e.
10. The Code does not speak to this particular situation. The examples used in this exercise are abbreviations and not part of the fraction itself. Therefore even though the expression appears to be complex because of the slash and horizontal fraction line it remains a simple fraction. The additional symbols would only confuse the reader.
11. Section 55a(viii).
12. Section 49a(i).
13. Sections 55 and 56.
14. Section 191a(iii).

P.S. The St. Petersburg workshops report is now available. See listing on Publications page.

NBA Bulletin, Winter 1984

MARY

1. The dictionary does not list these letters as abbreviations, how should they be transcribed?
2. Should the English letter indicator precede the "M, W and F" even though they are enclosed in parenthesis?
3. What mode of punctuation is required with the above letters?
4. The English letter indicator does not precede "Th and Su" why not?

JOHN

5. The numeral is not preceded by a space; however the numeric indicator has been used, why?
6. The "Su-" is followed immediately by what kind of a number?

CAMMY

7. Why are we not permitted to use the English braille symbol for the slash?
8. The Code states that there should not be a space following an abbreviation if what conditions are met?
9. A numeral which follows an abbreviation and is preceded by a hyphen requires a numeric indicator, does this also hold for a numeral which follows the slash?
10. The abbreviations "T" and "Sa" are joined to the fractions by a slash: does this change the fractions from simple to complex?

KEN

11. What rule governs the use/non-use of contractions in this example?

YOLANDA

12. The abbreviations for the days of week are now presented in a different form. What rule governs their usage?
13. Is the contraction in "Thurs" permitted?
14. What rule applies to the margins for the entire exercise?